

CLAIMS:

What is claimed is:

1. In a wireless communication system, a method for beamforming comprising:
identifying one or more target(s) for which a communication signal is intended;
identifying one or more other target(s) which may benefit from receipt of the
communication signal; and
developing a multi-lobe beampattern to transmit the communication signal to the
intended target(s) and the identified one or more other target(s).
2. A method according to claim 1, further comprising:
transmitting the communication signal to the intended target(s) and the identified other
target(s) employing the developed multi-lobe beampattern.
3. A method according to claim 1, wherein the wireless communication system implements
general packet radio services (GPRS), wherein identifying the target(s) comprises:
analyzing a received datagram for target information.
4. A method according to claim 3, wherein the target information includes at least
information regarding the intended target(s) of the wireless communication signal.
5. A method according to claim 4, wherein the information regarding the intended target(s)
comprise one or more of an electronic serial number, a media access controller (MAC) address, a
telephone number, an internet protocol (IP) address, and/or an application identifier.

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1 6. A method according to claim 3, wherein the target information includes at least
2 information regarding the intended targets of the wireless communication signal and intended
3 target(s) of a subsequent wireless communication signal.

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1 7. A method according to claim 1, wherein developing a multi-lobe beampattern comprises:
2 identifying a first spatial signature associated with the intended target(s);
3 identifying a second spatial signature associated with the identified other target(s); and
4 modifying one or more transmission characteristics of the communication signal based, at
5 least in part, on the identified first and second spatial signatures to generate a multi-lobe
6 beampattern directed to each of the intended target(s) and the identified other target(s).

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1 8. A method according to claim 1, further comprising:
2 identifying a spatial signature for undesired users; and
3 modify the multi-lobe beampattern to facilitate nulling of at least a subset of the
4 undesired user(s) based, at least in part, on the identified spatial signature for the undesired users.

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1 9. A transceiver comprising:
2 wireless communication resources, to selectively transmit a wireless communication
3 signal via an antenna array; and
4 a communications agent, coupled with the wireless communication resources, to identify
5 one or more target(s) for which the communication signal is intended as well as one or more
6 other target(s) which may also benefit from receipt of the communication signal, and to develop

a multi-lobe beam pattern to transmit the communication signal to the intended target(s) and the identified one or more other target(s).

10. A transceiver according to claim 9, wherein the communications agent analyzes a received datagram for transmission in the communication signal for target information.

11. A transceiver according to claim 10, wherein the target information includes at least information denoting the intended target(s) and information denoting other target(s) which may benefit from receipt of the communication signal.

12. A transceiver according to claim 10, wherein the target information comprises one or more of an electronic serial number (ESN), a media access control (MAC) address, an internet protocol (IP) address, a telephone number, and/or an application identifier.

13. A transceiver according to claim 10, wherein the communications agent identifies a first spatial signature associated with the one or more intended target(s) and a second spatial signature associated with the identified one or more other target(s).

14. A transceiver according to claim 13, the communications agent comprising:
a beamforming engine, to modify one or more transmission characteristics of the communication signal based, at least in part, on the identified first and second spatial signatures.

1 15. A transceiver according to claim 14, wherein beamforming engine modifies one or more
2 of a amplitude weight value and/or a phase weight value associated with each of the one or more
3 antennae in the antenna array to generate the developed beampattern.

1 16. A transceiver according to claim 15, wherein the communications agent identifies a
2 spatial signature associated with one or more undesired users of the communication signal,
3 wherein beamforming engine modifies one or more attributes of the multi-lobe beampattern to
4 null at least a subset of the undersired users.

1 17. A transceiver according to claim 9, further comprising:
2 a memory system having stored therein content; and
3 control logic, coupled with the memory system, to access and execute at least a subset of
4 the content to implement the communications agent.

1 18. A storage medium comprising content which, when executed by an accessing computing
2 device, causes the computing device to implement a communications agent to identify one or
3 more target(s) of a communication signal as well as one or more other target(s) which may also
4 benefit from receipt of the communication signal, and to develop a multi-lobe beampattern to
5 transmit the communication signal to the intended target(s) and the identified one or more other
6 target(s).

1 19. A storage medium according to claim 18, wherein the communications agent analyzes a
2 received datagram for transmission in the communication signal for target information.

1 20. A storage medium according to claim 19, wherein the target information includes at least
2 information denoting the intended target(s) and information denoting other target(s) which may
3 benefit from receipt of the communication signal.

1 21. A storage medium according to claim 19, wherein the target information comprises one
2 or more of an electronic serial number (ESN), a media access control (MAC) address, an internet
3 protocol (IP) address, a telephone number, and/or an application identifier.

1 22. A storage medium according to claim 19, wherein the communications agent identifies a
2 first spatial signature associated with the one or more intended target(s) and a second spatial
3 signature associated with the identified one or more other target(s).

1 23. A storage medium according to claim 22, wherein the communications agent selectively
2 modifies one or more transmission characteristics of the communication signal based, at least in
3 part, on the identified first and second spatial signatures.

1 24. A storage medium according to claim 23, wherein the communications agent modifies
2 one or more of a amplitude weight value and/or a phase weight value associated with each of the
3 one or more antennae in the antenna array to generate the developed beampattern.